

### REMARKS

Claims 1-34 remain pending in the application. Applicant respectfully requests reconsideration in light of the remarks presented.

Applicant notes that there is a new Examiner from the previous Office Action of March 30, 2006. In response to the previous Office Action, Applicant and the previous Examiner Schubert had a phone conference. Examiner Schubert suggested that Applicant amend the claim language to clarify that a normal reproduction mode includes a play mode and that the particular reproduction mode includes a fast forward mode. Applicant amended the claims according to Examiner Schubert's suggestion. At the time, Applicant believed that the amendments would make the claims allowable. At the very least, Applicant expected that any final rejection would have to cite a new reference to provide motivation for newly added claim timeline.

The Final Office Action relies almost completely on the analysis provided in the previous Office Action. In its rejection, the Office Action does cite a new reference, *Colligan* (U.S. Pat. No. 6,415,031). However, *Colligan* also fails to disclose the claim language suggested by Examiner Schubert. Accordingly, Applicant requests that the application be passed to issue. Alternatively, Applicant requests that the finality of the previous Office Action be rescinded and that a reference be cited, if any, that discloses Examiner Schubert's suggested limitation with an appropriate teaching suggestion or motivation analysis.

Moreover, Examiner Schubert also suggested that the limitation "a first group of descrambling keys being extracted in the normal reproduction mode, and a second group of descrambling keys being extracted in the particular reproduction mode" be added to further distinguish the claimed invention over *Akiyama*. Applicant amended the claims to include this limitation and yet the Office Action rejected this limitation over *Akiyama* using the identical

analysis previously used by Examiner Schubert prior to Applicant amending the claim according to the claim language suggested by Examiner Schubert (Office Action, Page 4 Lines 10-15). No new references are cited in this rejection.

Applicant provides the following remarks to further explain the novelty and unobviousness of Applicant's invention.

Applicant's broadcast apparatus broadcasts scrambled television signals for processing and descrambling by a reception apparatus. The reception apparatus allows a television viewer to save and view scrambled television programs in modes other than a normal reproduction mode (e.g. play mode). Using the reception apparatus the viewer may also view scrambled television programs in a particular reproduction mode (e.g. fast forward mode).

Conventional broadcast and reception devices allow a viewer to save and view scrambled television programs in normal reproduction modes. These devices, however, do not allow the viewer to view a scrambled television program in a particular reproduction mode with good fidelity. This is because a conventional broadcast device broadcasts an entitlement control message containing a descrambling key with each broadcast video unit. The descrambling key decodes television content for the next broadcast unit of video data. The broadcast units are received by a reception device and stored. The reception device in normal reproduction mode sequentially reproduces the broadcast units. The first video unit contains the entitlement control message having the descrambling key for the second video unit. The second video unit contains the entitlement control message having the descrambling key for the third video unit and so on. In normal reproduction mode the conventional reception device reproduces each video unit while descrambling each successive video unit.

A problem is encountered when a saved scrambled television program is reproduced in a particular mode, such as fast forward or rewind modes. In particular modes, the order or rate of reproduction is changed and to reproduce the video units in such modes, the reception apparatus must find and retrieve the descrambling key from the previous unit for each video unit. This places a considerable burden on the reception apparatus with the result often being poor or no video reproduction in particular modes.

Applicant's invention addresses this problem by providing a broadcast and reception apparatus that vitiates this problem. The broadcast apparatus broadcasts auxiliary information with each video unit, which includes information that may be used to identify the descrambling key needed in both the normal reproduction mode and in the particular reproduction mode. The reception apparatus uses this information to efficiently decode video units regardless of whether a viewer has selected a normal reproduction mode or a particular reproduction mode.

Claims 1-3, 11-12, 15, 17-19, 21-29 and 31-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hirose* (U.S. Pat. No. 5,917,915) in view of *Akiyama* (U.S. Pat. No. 6,463,155) and further in view of *Colligan* (U.S. Pat. No. 6,415,031).

*Hirose* discloses a system that addresses the problem of descrambling newspaper data that has been broadcast from a satellite, received by a subscriber and saved prior to the subscriber purchasing the newspaper data (*Hirose*, Column 2, Lines 8-14). *Hirose* proposes "double encrypting" newspaper data with a first key and a second key (*Hirose*, Column 2, Lines 60-67). The first key is made available to subscribers allowing them to unpack the broadcast data (*Hirose*, Figure 5 Element 87, Column 3, Lines 5-9). The second key is made available to subscribers who elect to purchase the newspaper data (*Hirose*, Figure 5, Element 400, Column 23 Lines 9-14). *Hirose* is notably silent regarding the problem addressed by Applicant's invention.

Namely, reproducing video images from scrambled video data in reproduction modes other than the normal reproduction mode, such as rewind or fast forward mode.

*Akiyama* discloses a system that addresses the problem of providing a subscriber access to scrambled broadcast services during a contract period (*Akiyama*, Column 1, Lines 36-45). *Akiyama's* proposed solution to the problem is to "double encrypt" the broadcast data with a master key that controls access to individual channel keys (*Akiyama*, Column 2, Lines 29-35). The master key is used to encrypt a reception device ID as well as contract information for that reception device (*Akiyama*, Column 2, Lines 52-55). The master key is then used by the receiver to decrypt the contract information and obtain the individual channel keys (*Akiyama*, Column 17, Lines 60-67). *Akiyama* is also notably silent regarding the problem addressed by Applicant's invention. Namely, reproducing video images from scrambled video data in reproduction modes other than the normal reproduction mode, such as rewind or fast forward mode.

*Colligan* discloses a system that addresses the problem of security for point cast video on demand signals (*Colligan*, Column 1, Lines 49-55). Video on demand point casting is a broadcasting model that allows video signals to be broadcast to specific users at specific times (*Colligan*, Column 1, Lines 50-52). Broadcasters receive encrypted broadcast content and decryption keys from video distributors. The video broadcasters in turn distribute the decryption keys to subscribers when they pay for the content. One problem with this model is that the keys are not synched with the time epoch of the video on demand billing cycle (*Colligan*, Column 1, Lines 59-63). *Colligan* proposes solving this problem through the use of renewable encryption (*Colligan*, Column 2, Lines 11-12). *Colligan* copies the encrypted video signal from the distributor, and the broadcaster decrypts the signal with a first key, and re-encrypts the signal with a second key for transmission to the subscriber (*Colligan*, Column 2, Lines 12-18). This

way the broadcaster may coordinate the key use cycle with billing epoch. *Colligan* like *Akiyama* and *Hirose* is notably silent regarding the problem addressed by Applicant's invention. Namely, reproducing video images from scrambled video data in reproduction modes other than the normal reproduction mode, such as rewind or fast forward mode.

In *Orthopedic Co., Inc. v. United States*, 217 USPQ 193 (C.A.F.C. 1983), the Federal Circuit set forth a useful guide for determining the scope and content of the prior art. *Orthopedic*, at pages 196-197, also focuses on the "problem" faced by the inventors:

In determining the relevant art. . . one looks at the nature of the problem confronting the inventor.

\* \* \*

[W]ould it then be nonobvious to this person of ordinary skill in the art to coordinate these elements in the same manner as the claims in suit? The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit [the patent application before the Examiner] as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quite improper when resolving the question of nonobviousness. (Emphasis added)

Thus, one highly relevant inquiry in making an evaluation under 35 U.S.C. §103 is "[t]he relationship between the problem which the inventor. . . was attempting to solve and the problem to which any prior art reference is directed." *Stanley Works v. McKinney Mfg. Co.*, 216 USPQ, 298, 304 (Del. D.C. 1981). Thus, in analyzing the prior art under Section 103 of the Act, we must clearly comprehend the problem addressed by the present inventors and that problem must be compared or contrasted, as the case may be, with the problems addressed by the prior art.

Every claimed embodiment of Applicant's invention recites a "normal reproduction mode includes a play mode and that the particular reproduction mode includes a fast forward mode."

The Office Action asserts *Colligan* teaches this limitation (Office Action, Page 4, Lines 10-17). Applicant traverses.

*Colligan* teaches three modes to determine what type of transport stream packet to encrypt (*Colligan*, Column 11, Lines 35-37). The three modes correspond to the I frame, the B frame, and the P framer of the MPEG standard (*Colligan*, Column 11, Lines 39-42). I, B and P frames refer to the type of data compression used to compress a groups of pictures. I, B and P frames are not the same or equivalent to the recited limitation, “a normal reproduction mode that includes a play mode or a particular reproduction mode that includes a fast forward mode”.

All three of the cited references fail to disclose this limitation making claims 1-3, 11-12, 15, 17-19, 21-29 and 31-34 patentable over any combination of *Hirose*, *Akiyama* and *Colligan*.

Applicant also notes that Office action also fails to provide a motivation to combine *Hirose*, *Akiyama* and *Colligan* in the particular manner Applicant has claimed. As explained above *Hirose*, *Akiyama* and *Colligan* all are attempting to solve a much different problem. The Federal Circuit has held that a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but some motivation to combine the prior art teachings in the particular manner claimed. See, e.g., *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (“Particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination *in the manner claimed*.” (emphasis added)); *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (“In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination *in the manner claimed*.” (emphasis added)).

The lack of motivation to combine in the manner claimed renders 1-3, 11-12, 15, 17-19, 21-29 and 31-34 even more patentable.

Claims 4, 8, 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hirose* in view of *Akiyama* and *Colligan* and further in view of *Morinaga* (U.S. Pat. No. 6,792,000).

*Morinaga* discloses a satellite broadcast receiving device having a built in hard disk drive (*Morinaga*, Column 2, Lines 61-64). *Morinaga* is concerned with descrambling 13 a satellite signal for placement on the hard disk 42 (*Morinaga*, Figure 1).

*Morinaga* fails to disclose or suggest a normal reproduction mode that includes a play mode or a particular reproduction mode that includes a fast forward mode making claims 4, 8 and 13 patentable over any combination of *Hirose*, *Akiyama*, *Colligan* and *Morinaga*.

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hirose* in view of *Akiyama*, *Colligan* *Morinaga* and further in view of *Kahn*.

*Kahn* discloses a system and method for storing and retrieving programming for subsequent replay (*Kahn*, Column 2, Lines 48-49). *Kahn* purports to increase media security by eliminating concern regarding proliferation of unauthorized digital copies (*Kahn*, Column 4, Lines 9-10).

*Kahn* fails to disclose or suggest a normal reproduction mode that includes a play mode or a particular reproduction mode that includes a fast forward mode making claim 9 patentable over any combination of *Hirose*, *Akiyama*, *Colligan*, *Morinaga* and *Kahn*.

Claims 5-7, 14, 16, 20 and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Hirose* *Akiyama* *Colligan* and *Morinaga*, and further in view of *Sato* (U.S. Pat. No. 6,219,422).

*Sato* discloses a device that purports to increase the reliability of pay per view system (Sato Lines 39-42). *Sato* asserts that this can be accomplished through selective reproduction (Sato Line 39).

*Sato* is silent with regard to reproduction modes and *Sato* fails to disclose or suggest a normal reproduction mode that includes a play mode or a particular reproduction mode that includes a fast forward mode, making claims 5-7, 14, 16, 20 and 30 patentable over any combination of *Hirose*, *Akiyama*, *Colligan*, *Morinaga* and *Sato*.

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Hirose* in view of *Akiyama*, *Colligan* *Morinaga* and further in view of *Ando*.

*Ando* discloses a system for efficiently recording a transport packet in a streamer (*Ando*, Paragraph 21). *Ando* asserts that system is an improvement in digital data streaming of an MPEG stream (*Ando*, Paragraph 1).

*Ando* fails to disclose or suggest a normal reproduction mode that includes a play mode or a particular reproduction mode that includes a fast forward mode, making claim 10 patentable over any combination of *Hirose*, *Akiyama*, *Colligan*, *Morinaga* and *Ando*.

For the reasons stated above, Applicant believes the application is now in condition for allowance and respectfully requests early notification of the same.

In view of the above amendments and remarks, it is respectfully submitted that all the pending claims are in condition for allowance, and such action is earnestly solicited. If the Examiner believes that a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

Very truly yours,

**SNELL & WILMER L.L.P.**

A handwritten signature in black ink, appearing to read 'J. Price', is written over a horizontal line.

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